

Investigation of Injury Anxiety Levels of Students Playing Sports

Mehmet Vakıf Durmuşoğlu

National Ministry of Education, Physical Education and Sports Teacher, Kahramanmaraş / Turkey,

 <https://orcid.org/0000-0002-4781-324x>

Davut Atilgan

Kahramanmaraş Sütçü İmam University, Kahramanmaraş /Turkey,

 <https://orcid.org/0000-0002-8475-4488>

Abstract: In this study, it is aimed to examine the differentiation status of the participants in terms of some demographic variables in order to determine the anxiety of the students towards sports injury. This quantitative study was carried out in a descriptive survey model. The sample of the study consists of 317 participants from high school students who continue their education in schools administered by Onikisubat and Dulkadiroğlu District Directorate of National Education in Kahramanmaraş city center in Turkey. The data of the research are analyzed using the statistical software program Jamovi 2.3.16. As a result of the research, it has been found that the anxiety scores of the participants towards sports injury are moderate. In the sports injury anxiety scale, statistically significant differences have been found in terms of what kind of sports they do, how many days a week they do sports, and whether they are injured or injured while doing sports. As a result, with this research, students' anxiety about sports injury has been determined in terms of different variables.

Keywords: Sport, Injury, Anxiety, Student.

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Introduction

Anxiety is the uncertainty of how it will happen at the moment and in the future; perhaps it can be defined as a state of worry and uneasiness about a subjective situation that is unlikely to happen (Sahin, 1985; Erskine, 2015; Kring and Johnson, 2015). Anxiety, which negatively affects the performance of the athlete, is also expressed as tension and fear under threat (Buyukozturk, 1997).

Sports injury anxiety is a situation that occurs during sports activities and causes the athlete to stay away from sports life and requires medical treatment (Fuller and his friends 2006; Li and her friends 2020). Athletes explain that the injury prevents them from participating in trainings or competitions, and they fear that they will

not be able to recover the performance loss they experienced while they are away from sports and that they will be injured again when they return to sports. In the literature, there is a common view that the anxiety levels of athletes are high that they cannot return to their previous performance levels after injury (Budak and his friends, 2020; Podlog and Eklund, 2005; Glazer, 2009).

Anxiety of Losing Talent: It can be expressed as the fear of not being able to fully display the abilities of the athlete and the anxiety of not reaching the level he wants to reach. Regarding the anxiety of losing talent, which is the type of anxiety that athletes often experience; Özder (2010), In his study, she stated that the athletes were most concerned about losing their athletic abilities when they were injured, and revealed that the injury anxiety of the athletes was related to the severity of the injury and the number of injuries experienced.

Weak Perception Anxiety: It is the formation of the thought that the athlete, who is exposed to injuries, is not at a sufficient level physically by her athlete friends, managers and social environment. In a similar statement, Aydoğan and her friends, (2022) stated that the athletes who experienced injuries felt inadequate because they could not participate in the training or the competition, thinking that they could not be effective in reaching the goals set by the team.

Suffering Anxiety: It is thought as the thought that the pain that the athlete will be exposed to in injuries and injuries will make her feel helpless and weak, and the anxiety of not being able to tolerate these pains. In related studies; Cassidy (2006) found in his study that college athletes who had at least three previous injuries scored significantly higher on pain-related anxiety than athletes who had not been injured before. Steffen and her friends (2009), in their study on female football players, stated that players with a history of injury felt an anxiety reaction that weakened their performance compared to those without a history of injury.

Anxiety of Disappointment: It is the anxiety of not being able to meet the expectations of the athletes, family, social environment, spectators and managers who have invested in them. It is important for the coach, families, teammates to know how the injured athlete feels, and to determine the changes in their psychological state after the injury, in terms of providing the necessary motivation for the athlete to return to sports life (Gennarelli and his friends 2020).

Anxiety of Losing Social Support: It is imagining that the athlete will not be able to reach the desired level again after the injury, and thinking that people will move away from her in parallel with this thought.

Re-Injury Anxiety: It can be expressed as the fear of experiencing the pain, loss of time, poor performance and economic losses experienced by the athlete who is exposed to sports injury. It is quite normal for an athlete injured during sports activities to have fear and anxiety in the following processes due to this experience. Mankad and her friends, (2009), in a study they conducted; They revealed that, as a result of sports injuries that occur in training and/or competitions, athletes experience significant emotional traumas such as being deprived of their athlete identity, not being able to play again, being injured again, and that their depressive and anxiety

levels increase due to these traumas. In addition, Konter (1996) found in his study that the anxiety levels of football players who were exposed to a sports injury were significantly higher than those of football players who were not exposed to sports injuries.

In this study, which aimed to examine the differentiation status of the participants in terms of some demographic variables in order to determine the anxiety of the students towards sports injury, answers were sought to the following questions:

1. What are the students' anxiety scores for sports injuries?
2. Is there a significant difference in students' anxiety about sports injuries in terms of the variable of which type of sport they do?
3. Is there a significant difference in students' anxiety about sports injuries in terms of how many days a week they do sports?
4. Is there a significant difference in students' anxiety about sports injuries in terms of the variable of injury and injury while doing sports?

Method

Research Model

The research is a quantitative study and was carried out in a descriptive survey model. In this study, it was ensured that the differentiation status of the participants in terms of some demographic variables related to the students' anxiety about sports injuries was determined. In this study, consent was obtained from all participants with an 'Informed Voluntary Consent Form'.

Population and Sample

The universe of the research consists of high school students who continue their education in schools in Kahramanmaraş. The sample of the study consisted of 317 [female (N:171) and male (N:146)] high school students studying in schools selected by random sampling method within the body of the Directorate of National Education in Kahramanmaraş city center.

Results

Personal information of the high school students participating in the study is given in Table 1.

Table 1. Participant information included in the research sample

By Demographic Variables		N	%
What Kind of Sports	Individual Sports	117	36.9
	Team Sports	200	63.1

	1-3 days a week	173	54.6
How Many Days of Sports per Week	3-5 days a week	84	26.5
	5-7 days a week	31	9.8
	I do sport every day	29	9.1
Injury and Injury Sports	Yes	94	29.7
While Playing	No	137	43.2
	Partially	86	27.1

Data Collection Tools

Sports Injury Anxiety Scale

It was developed by Rex and Metzler (2016). It was adapted into Turkish by Caz, Kayhan and Bardakçı (2019). It is a 5-point Likert type. The researchers who adapted the scale into Turkish found the Cronbach Alpha value of the scale as .87; sub-factors anxiety of losing ability .72, anxiety of being perceived weak .64, anxiety of suffering .78, anxiety of disappointment .88, anxiety of losing social support .81 and re-injury anxiety .61. In this study, the Cronbach Alpha coefficient was .90; anxiety of losing one's ability was .79, anxiety about being perceived weak was .75, anxiety about suffering was .74, anxiety about disappointment was .88, anxiety about losing social support was .87, and re-injury anxiety was .78.

Data Analysis

Data collection was started in March 2022 and was completed in June 2022. Scale forms were sent to the participants individually and through the school principals, and usable feedback was obtained from 317 participants. The data of the research were analyzed using the statistical software program Jamovi 2.3.16. Whether the scores obtained to determine the tests to be used in the research show a normal distribution or not was examined by the skewness coefficient method (Buyukozturk, 2018). As a result of the normality test, the skewness values of the data were .919 in the "Sports Injury Anxiety Scale"; In the sub-factors, it was found that the anxiety of losing one's ability was .738, the anxiety of being perceived weak was .754, the anxiety of suffering was -.120, the anxiety of disappointment was .282, the anxiety of losing social support was .885, and the re-injury anxiety was -.002. Since the distribution was normal in all dimensions, t-Test and One-Way Analysis of Variance (ANOVA) were used to determine the differentiation between the variables, and Post-Hoc tests were used to determine the groups with a difference for the F value found to be significant.

Findings

In this part of the research, statistical evaluation of the data was made within the scope of the research and the results of the evaluation were shown in tables. Findings regarding the arithmetic average and standard deviation values of the scores of the participants obtained from the sports injury anxiety scale are shown in Table 2.

Table 2. Sports injury anxiety scale arithmetic mean and standard deviation and sports injury anxiety scale anxiety score values of the participants.

Scale-Factor	N	Min-Max	M	SD
Sports Injury Anxiety Scale Arithmetic Mean and Standard Deviation Values	317	1-5	2.67	.77
Sports Injury Anxiety Scale Anxiety Score	317	23-91	50.78	14.63

When Table 2 is examined, it is seen that the arithmetic mean and standard deviation and sports injury anxiety scores of the participants are moderate. The t-test results of the sports injury anxiety scale scores according to the what kind of sports the participants do status of the participation are shown in Table 3.

Table 3. Independent group t-Test findings in the factor dimensions of sports injury anxiety scale scores according to the variable of what kind of sports the participants do.

Scales	Factors	What Kind of		t	p
		Sports Do	They Do		
General	Individual	2.92	.93	4.48	.000*
	Team	2.53	.62		
Anxiety of Losing	Individual	2.62	1.16	2.71	.007*
	Team	2.31	.86		
Talent	Individual	2.69	1.24	4.00	.000*
	Team	2.19	.95		
Poor Perception	Individual	3.37	.99	3.11	.002*
	Team	3.03	.90		
Anxiety	Individual	2.96	1.22	2.71	.007*
	Team	2.61	1.06		
Suffering Anxiety	Individual	2.48	1.19	3.49	.001*
	Team	2.03	1.05		
Anxiety of Disappointment	Individual	3.28	1.15	3.26	.001*
	Team	2.88	.97		

*(p<0.05)

According to Table 3., as a result of the t-Test, a statistically significant difference was found in the sports injury anxiety scale score and in all of the sub-factors in terms of the type of sports they do ($p < .05$). It was found that students who do individual sports have a significantly higher level of anxiety about losing their talent,

anxiety about being perceived weak, anxiety about being disappointed, anxiety about losing social support, anxiety about re-injury, and overall scale compared to students who do team sports.

The results of the one-way analysis of variance (ANOVA) test in factor dimension according to how many days a week the do sports variable regarding the sports injury anxiety scale scores of the participations are shown in Table 4.

Table 4. One-way analysis of variance (ANOVA) findings in the factor dimension of sports injury anxiety scale scores according to the variable of how many days a week the participants do sports.

Factors	How Many Days A Week Do They Do Sports		M	SD	F	p	Groups with a difference (Post-Hoc Tests)
	1-3 days per week (a)	3-5 days per week (b)					
General	1-3 days per week (a)	2.77	.78				
	3-5 days per week (b)	2.45	.68				
	5-7 days a week (c)	2.78	.83	3.47	.016*		a - b
	Every day (d)	2.66	.78				
Anxiety of Losing Talent	1-3 days per week (a)	2.52	1.01				
	3-5 days per week (b)	2.24	.86				
	5-7 days a week (c)	2.33	1.22	1.58	.194		-
	Every day (d)	2.47	.90				
Poor Perception Anxiety	1-3 days per week (a)	2.48	1.11				
	3-5 days per week (b)	2.06	.97				
	5-7 days a week (c)	2.55	1.09	3.29	.021*		a, c - b
	Every day (d)	2.51	1.23				
Suffering Anxiety	1-3 days per week (a)	3.31	.83				
	3-5 days per week (b)	2.85	1.07				
	5-7 days a week (c)	3.24	1.00	4.99	.002*		a, c - b
	Every day (d)	3.02	.99				
Anxiety of Disappointment	1-3 days per week (a)	2.83	1.12				
	3-5 days per week (b)	2.58	1.08				
	5-7 days a week (c)	2.77	1.35	1.18	.317		-
	Every day (d)	2.59	1.08				
Anxiety of Losing Social Support	1-3 days per week (a)	2.24	1.11				
	3-5 days per week (b)	1.93	1.09				
	5-7 days a week (c)	2.35	1.24	2.81	.039*		a, c, d - b
	Every day (d)	2.53	.99				
Re-Injury Anxiety	1-3 days per week (a)	3.10	1.03	1.76	.155		-

3-5 days per week (b)	2.89	1.05
5-7 days a week (c)	3.26	1.26
Every day (d)	2.78	.96

*($p < 0.05$)

When Table 4 is examined, as a result of the analysis, it has been revealed that there are statistically significant $p < 0.05$ differences among the sub-factors, anxiety of being perceived weak, anxiety of suffering, anxiety of losing social support and overall scale, according to the variable of how many days a week the participants do sports. As a result of the Post-Hoc test performed to determine which groups the differences originate from, it is seen that those who do sports 1-3 days a week have higher sports injury anxiety than those who do sports 3-5 days a week. In the sub-factors of poor perception anxiety and suffering anxiety, it was seen that those who do sports 1-3 days a week and 5-7 days a week have higher sports injury anxiety than those who do sports 3-5 days a week. In the sub-factor of anxiety about losing social support, it is seen in the table that those who do sports 1-3 days a week, 5-7 days a week and every day have higher sports injury anxiety than those who do sports 3-5 days a week. According to the variable of how many days a week the participants do sports, there was no statistically significant $p < 0.05$ difference in the sub-factors of anxiety about losing talent, anxiety about disappointment and re-injury.

The results of the one-way analysis of variance (ANOVA) test in factor dimension according to injury and injury while doing sports injury anxiety scale scores of the participations are shown in Table 5.

Table 5. One-way analysis of variance (ANOVA) findings in the factor dimension of the sports injury anxiety scale scores of the participants according to the variable of injury and injury while doing sports.

Factors	Injury and Injury While Playing Sports	M	SD	F	p	Groups with a
						difference (Post-Hoc Tests)
General	Yes (a)	3.01	.99			
	No (b)	2.52	.63	13.91	.000*	a - b, c
	Partially (c)	2.55	.56			
Anxiety of Losing Talent	Yes (a)	2.82	1.29			
	No (b)	2.25	.75	11.38	.000*	a - b, c
	Partially (c)	2.27	.84			
Poor Perception Anxiety	Yes (a)	2.65	1.35			
	No (b)	2.21	.94	4.59	.011*	a - b
	Partially (c)	2.33	.97			
Suffering Anxiety	Yes (a)	3.43	1.19			
	No (b)	3.05	.87	5.70	.004*	a - b, c
	Partially (c)	3.03	.67			
Anxiety of	Yes (a)	3.18	1.28	11.09	.000*	a - b, c

Disappointment	No (b)	2.55	1.00			
	Partially (c)	2.55	1.03			
Anxiety of Losing	Yes (a)	2.43	1.35			
	No (b)	2.18	1.06	4.15	.017*	a – c
	Partially (c)	1.96	.85			
Social Support	Yes (a)	3.41	1.12			
	No (b)	2.79	1.04	10.43	.000*	a – b, c
	Partially (c)	3.00	.89			

*(p<0.05)

When Table 5 is examined, as a result of the analysis, a statistically significant difference was found in the sports injury anxiety scale score and in all of the sub-factors according to the variable of injury and injury while doing sports ($p < .05$). As a result of the Post-Hoc test, which was conducted to determine between which groups the differences originated, the sub-factors anxiety of losing ability, anxiety of suffering, anxiety of disappointment, re-injury anxiety, and the overall scale of injury and injury while doing sports were compared to those who were yes, no, and those who had partial sports injury. It can be seen in the table that their concerns are higher. In the sub-factor of perceived weak anxiety, it was determined that those who were injured and experienced injury while doing sports had higher sports injury anxiety than those who were yes. In the sub-factor of the anxiety of losing social support, it is seen in the table that those who were injured while doing sports and who were injured while doing sports had higher anxiety about sports injuries than those who were partially injured.

Discussion and Conclusion

In this study, it was ensured that students' levels of anxiety about sports injury anxiety and their differentiation status in terms of some demographic variables they had were determined.

It was concluded that the arithmetic mean and standard deviation and sports injury anxiety scores of the participants were moderate. Although some researchers have stated that athletes with high anxiety levels are more likely to be exposed to more severe injuries than athletes with low anxiety levels, some researchers have stated that there is no significant relationship between sports injury and anxiety formation (Steffen and her friends, 2009; Sibold and his friends, 2011). Therefore, it is understood that there is still much to be discovered about the relationship between anxiety and injury (Johnson and his friends, 2014).

With this; Caz, Kayhan and Bardakci (2019) stated that as the mean score (total score and sub-dimensions) obtained from the scale increases, injury anxiety increases. On the other hand, Ivarsson and Johnson (2010); They stated that more injuries were observed in some athletes with high anxiety levels. Negative thoughts and experiences can increase the athlete's risk of re-injury and have a detrimental effect on the athlete's self-

confidence and post-injury performance (Podlog and Eklund, 2005; Glazer, 2009). In terms of the variable of what kind of sports the students do, the anxiety of losing talent, the anxiety of being perceived weak, the anxiety of suffering, the anxiety of disappointing, the anxiety of losing social support, the anxiety of re-injury were significantly higher than the students who do team sports in terms of the sub-factors and the overall scale. Results have been reached. Ünver and his friends, (2020), in his research on sports students at the university; When the sports injury anxiety sub-dimension scores were compared according to the branches, it was found that muaythai athletes in the sub-dimension of perceived weak anxiety, handball players in the anxiety of disappointment sub-dimension, athletics athletes in the anxiety of losing social support sub-dimension, and football players in the sub-dimension of the anxiety of losing ability were found to have significantly higher anxiety scores has done.

Karayol and Eroglu (2020) determined significant differences in favor of team sports in the sub-dimensions of pain anxiety and re-injury anxiety, which are among the sub-dimensions of sports injury anxiety, according to the sport branch variable, but could not see any significant difference in other sub-dimensions. Kayhan, Yapıcı and Ustun (2019) conducted a study on female athletes and found significant differences only in the sub-dimension of skill loss anxiety of the participants who do individual sports. Moreover; Tanyeri (2019), in his study of athletes from different branches, did not find any difference in terms of injury anxiety in athletes interested in team sports and individual sports.

In general, it can be said that the athletes who do team sports have more anxiety about losing their place and position in the team and getting injured again, while the athletes who do individual sports have more injury anxiety at the point of being exposed to the sports branch they have done and close contact.

According to the variable of how many days a week the participants do sports, it was determined that those who do sports 1-3 days a week have higher sports injury anxiety than those who do sports 3-5 days a week. In the sub-factors of poor perception anxiety and suffering anxiety, it was determined that those who do sports 1-3 days a week and 5-7 days a week have higher sports injury anxiety than those who do sports 3-5 days a week. In the sub-factor of anxiety about losing social support, it was found that those who do sports 1-3 days a week, 5-7 days a week and every day have higher sports injury anxiety than those who do sports 3-5 days a week. It can be said that those who do sports 3-5 days a week do moderate and balanced sports. As a result of the research, Atilgan (2022) determined that the participants whose weekly training number is 3-4 days have higher scores in the general individual competitiveness scale and in the dimension of enjoying competition than the participants whose weekly training number is 1-2 days and 5-6 days. In the dimension of avoiding the competition, on the contrary, it was determined that the participants with 3-4 days of weekly training had lower scores than the participants whose weekly training number was 1-2 days and 5-6 days. Atilgan (2022) expressed these results as the participants whose weekly training number is 3-4 days compared to the participants whose weekly training number is 1-2 days and 5-6 days, their individual competitiveness level is good, they enjoy competition and they do not avoid the competition.

Frequency of doing sports is effective in motivating the athletes as well as reducing their worries about being exposed to injuries. As in every other subject, moving away from the field about sports injury anxiety also brings disability anxiety. Harmony, stability and balance are the indispensable main elements of sports. Our research results show that the balance of work and stability in the frequency of doing sports minimize the injury anxiety levels of the athletes.

According to the variable of injury and injury while doing sports, it was determined that the anxiety of losing ability, anxiety of suffering, anxiety of disappointment, re-injury anxiety, and in the scale, those who were injured and injured while doing sports had higher levels of sports injury anxiety than those who did not and those who were partially injured while doing sports. In the sub-factor of perceived weak anxiety, it was found that those who were injured while doing sports and those whose injury status were yes had higher sports injury anxiety than those who were no; In the sub-factor of the anxiety of losing social support, it was concluded that those who were injured while doing sports and those who had an injury had higher anxiety about sports injury than those who were partially injured. It is considered as an expected result that the anxiety scores of those who have experienced injury and injury while doing sports are higher. Sport; movement, struggle, forcing physical capacity, stress, anxiety, facing difficulties, being exposed to blows and injury. It is seen as a natural result that such situations cause anxiety.

Conclusion

As a result of this research; According to the sports branch of the athletes, the contact and difficulties they are exposed to, whether the sport is an individual and team sport, the level of risk involved in the sport, the frequency of the sport, and whether the athletes have been injured or not, the anxiety of the athletes has been revealed. As a result, with this research, sports injury anxiety of students was determined in terms of different variables.

Recommendations

New results can be obtained by using the sports injury anxiety scale used in this study together with different scales. For example, as a new study proposal, a research can be conducted by using the sports injury anxiety scale and the anxiety elimination scale together. Injury concerns and causes can be compared by conducting studies on athletes of different age groups. Anxiety affects sports negatively, as it does in every field. It is of great importance that sports psychologists are trained competently and serve in the field.

Notes

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